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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,644	02/22/2006	Gunnar Plesch	12810-00197-US	5344

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EXAMINER	
COLLINS, CYNTHIA E	
ART UNIT	PAPER NUMBER
1638	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,644	PLESCH ET AL.	
	Examiner	Art Unit	
	Cynthia Collins	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,25 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-21,25 and 27-30* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Groups 1-193, claim(s) 1, drawn to a process comprising increasing or generating in a non-human organism the biological activity represented by a protein. Group 1 is directed to increasing or generating in a non-human organism the biological activity represented by a protein as depicted in SEQ ID NO:2, Group 2 is directed to increasing or generating in a non-human organism the biological activity represented by a protein as depicted in SEQ ID NO:4, ... Group 193 is directed to increasing or generating in a non-human organism the biological activity represented by a protein as depicted in SEQ ID NO:394.

Groups 194-386, claim(s) 2(a)-(e) and (i), and claims 3-5, drawn to a process comprising increasing or generating in a non-human organism the expression of at least one nucleic acid molecule. Group 194 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:2, Group 195 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:4, ... Group 386 is directed to increasing or

generating in a non-human organism the expression of at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:394.

Group 387, claim(s) 2(f) and claims 3-5, drawn to a process comprising increasing or generating in a non-human organism the expression of at least one nucleic acid molecule which is obtained by amplifying nucleic acid molecules from a cDNA library or a genomic library using the primers in SEQ ID NO:53 or SEQ ID NO:54.

Groups 388-581, claim(s) 2(g) and claims 3-5, drawn to a process comprising increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide which is isolated with the aid of monoclonal antibodies against a polypeptide encoded by one of the nucleic acid molecules of 2(a) to (f). Group 388 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide which is isolated with the aid of monoclonal antibodies against a polypeptide encoded by at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:2, Group 389 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide which is isolated with the aid of monoclonal antibodies against a polypeptide encoded by at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:4... Group 581is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule which is obtained by amplifying nucleic acid molecules from a cDNA library or a genomic library using the primers in SEQ ID NO:53 or SEQ ID NO:54.

Groups 581-590, claim(s) 2(h) and claims 3-5, drawn to a process comprising increasing or generating in a non-human organism the expression of at least one nucleic acid molecule. Group 581 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:47, Group 582 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:48, ... Group 590 is directed to increasing or generating in a non-human organism the expression of at least one nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:400.

Groups 591-783, claim(s) 6(a)-(e) and claims 7-12, drawn to an isolated nucleic acid molecule, a nucleic acid construct comprising one or more regulatory elements which confers the expression of the nucleic acid molecule of claim 6, a vector comprising the nucleic acid molecule as claimed in claim 6, and a host cell transformed with the nucleic acid molecule of claim 6. Group 591 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:2, Group 592 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:4, ... Group 783 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:394.

Group 784, claim(s) 6(f) and claims 7-12, drawn to an isolated nucleic acid molecule comprising a nucleic acid molecule which is obtained by amplifying nucleic acid

molecules from a cDNA library or a genomic library using the primers in SEQ ID NO:53 or SEQ ID NO:54, a nucleic acid construct comprising one or more regulatory elements which confers the expression of the nucleic acid molecule of claim 6, a vector comprising the nucleic acid molecule as claimed in claim 6, and a host cell transformed with the nucleic acid molecule of claim 6.

Group 785- 978, claim(s) 6(g) and 7-12, drawn to an isolated nucleic acid molecule, a nucleic acid construct comprising one or more regulatory elements which confers the expression of the nucleic acid molecule of claim 6, a vector comprising the nucleic acid molecule as claimed in claim 6, and a host cell transformed with the nucleic acid molecule of claim 6. Group 785 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding a polypeptide which is isolated with the aid of monoclonal and/or polyclonal antibodies against a polypeptide encoded by at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:2, Group 786 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding a polypeptide which is isolated with the aid of monoclonal and/or polyclonal antibodies against a polypeptide encoded by at least one nucleic acid molecule encoding of the polypeptide as depicted in SEQ ID NO:4... Group 978 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule which is obtained by amplifying nucleic acid molecules from a cDNA library or a genomic library using the primers in SEQ ID NO:53 or SEQ ID NO:54.

Groups 979-988, claim(s) 6(h) and 7-12, drawn to an isolated nucleic acid molecule, a nucleic acid construct comprising one or more regulatory elements which confers the

expression of the nucleic acid molecule of claim 6, a vector comprising the nucleic acid molecule as claimed in claim 6, and a host cell transformed with the nucleic acid molecule of claim 6. Group 979 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:47, Group 980 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:48, ... Group988 is directed to an isolated nucleic acid molecule comprising a nucleic acid molecule encoding a polypeptide comprising the consensus sequence as depicted in SEQ ID NO:400.

Groups 989- 1159, claim(s) 6(i) and claims 7-12, drawn to an isolated nucleic acid molecule, a nucleic acid construct comprising one or more regulatory elements which confers the expression of the nucleic acid molecule of claim 6, a vector comprising the nucleic acid molecule as claimed in claim 6, and a host cell transformed with the nucleic acid molecule of claim 6. Group 989 is directed to an isolated nucleic acid molecule that distinguishes over SEQ ID NO:1, Group 990 is directed to an isolated nucleic acid molecule that distinguishes over SEQ ID NO:55, ... Group 1159 is directed to an isolated nucleic acid molecule that distinguishes over SEQ ID NO:393.

Groups 1160-1728, claim(s) 13, drawn to a process for producing a polypeptide using the nucleic acid molecule as claimed in claim 6.

Groups 1729-1899, claim(s) 14, drawn to a polypeptide. Group 1729 is directed to a polypeptide that distinguishes over SEQ ID NO:2, Group 1730 is directed to a

polypeptide that distinguishes over SEQ ID NO:56,... Group 1728 is directed to a polypeptide that distinguishes over SEQ ID NO:394.

Groups 1900-2092, claim(s) 15, drawn to an antibody that specifically binds to the polypeptide encoded by a nucleic acid as claimed in claim 6a).

Groups 2093-2661, claim(s) 16, drawn to a plant comprising a host cell as claimed in claim 12.

Groups 2662-3230, claim(s) 17, drawn to a method for screening for agonists and antagonists using cells, tissues, plants or microorganisms which express the polypeptide encoded by the nucleic acid molecule of claim 6.

Groups 3231-3799, claim(s) 18, drawn to a process for the identification of a compound using a plant cell or tissue or microorganism or plant expressing the polypeptide encoded by the nucleic acid molecule of claim 6.

Groups 3800-4368, claim(s) 19, drawn to a first method for the identification of a gene product using the nucleic acid molecule of claim 6.

Groups 4369-4937, claim(s) 20, drawn to a second method for the identification of a gene product by identifying nucleic acid molecules which are at least 30% homolog to the nucleic acid molecule of claim 6.

Groups 4938-5506, claim(s) 21, drawn to a method for the production of an agricultural composition using a compound identified according to claim 17.

Groups 5507-5699, claim(s) 25, drawn to a first food or feed composition comprising the nucleic acid molecule of claim 6.

Groups 5700-5892, claim(s) 25, drawn to a first food or feed composition comprising a polypeptide encoded by the nucleic acid molecule of claim 6.

Groups 5893-6085, claim(s) 25, drawn to a first food or feed composition comprising an antibody which specifically binds to the protein encoded by the nucleic acid molecule of claim 6.

Groups 6086-6278, claim(s) 27, drawn to a first composition comprising the nucleic acid molecule of claim 6.

Groups 6279-6471, claim(s) 27, drawn to a first composition comprising a polypeptide encoded by the nucleic acid molecule of claim 6.

Groups 6472-6664, claim(s) 27, drawn to a first composition comprising an antibody which specifically binds to the protein encoded by the nucleic acid molecule of claim 6.

Groups 6665-7233, claim(s) 28, drawn to a second composition comprising an antagonist or agonist of a polypeptide encoded by the nucleic acid molecule of claim 6.

Groups 7234-7802, claim(s) 29, drawn to a second food or feed composition comprising the antagonist or agonist identified according to claim 17.

Group 7803-8371, claim(s) 30, drawn to a method for identifying plant varieties using the nucleic acid molecules claimed in claim 6.

The inventions listed as Groups 1-8371 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature linking the inventions of Groups 1-8371 is a nucleic acid molecule encoding a protein that confers an increase in the amount of a fine chemical in an organism or a part thereof. However, a nucleic acid molecule encoding a protein that confers an increase in the amount of a fine chemical in an organism or a part thereof is obvious or anticipated over Madaule P. et al. (Characterization of two members of the rho gene family from the yeast Saccharomyces cerevisiae. Proc Natl Acad Sci U S A. 1987 Feb;84(3):779-8, Applicant's Search Report), and therefore does not constitute a special technical feature as defined by PCT Rule 13.2, because it does not define a contribution over the prior art.

The examiner has required restriction between product (Groups 591-1159) and process claims (Groups 3800-4368 and 7803-8371). Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction

requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai, In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cynthia Collins
Primary Examiner
Art Unit 1638

CC

Cynthia Collins
12/11/07